

REMARKS

Claims 1-11 and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese patent publication 10-35699. Claims 12-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over that same Japanese reference, in view of Hidding, United States Patent No. 5,307,945. Claims 20-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hidding. Claims 20-35 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Japanese reference in view of Beck, United States Patent No. 5,297,688, and Moore, United States Patent No. 4,566,603. Claims 28-35 have been cancelled and are being presented for further prosecution in a divisional application being filed on even date herewith. The rejections of claims 1-27 and 36 are traversed, and reconsideration and withdrawal of them are requested. Applicants' invention, as described by these claims, is neither shown nor suggested by the references, whether the references be considered one at a time or in combination.

The Amendment filed February 27, 2003 included as an attachment a certified translation of column 11, lines 16-23 of Japanese Patent No. 10-35699. The May 20, 2003 Office Action states that the translation was not received by the Examiner with the Amendment. Another copy of the certified translation is attached.

In Applicants' invention as set forth in claim 1 and its dependent claims 2-19, as well as in independent claim 36, the container closure includes an outer cylindrical sealing protrusion extending downwardly from the inner surface of the closure top panel wall and having a minimum internal diameter D1, and an inner cylindrical sealing protrusion also extending downwardly

from the inner surface of the top panel wall but having a maximum external diameter D3. In addition, the container closure includes an annular sealing ridge located between the outer cylindrical sealing protrusion and the inner cylindrical sealing protrusion and projecting downwardly from the inner surface of the top panel wall. The container closure may be mounted on the mouth-neck portion of a container which mouth-neck portion has an external diameter D2 and an internal diameter D4. The internal diameter D1 of the outer cylindrical sealing protrusion is smaller than the external diameter D2 of the mouth-neck portion of the container by an amount of from 0.05 mm to 0.60 mm. The internal diameter D4 of the mouth-neck portion of the container is smaller than the maximum external diameter D3 of the inner cylindrical sealing protrusion by an amount of from 0.25 mm to 1.50 mm. As a consequence, when the container closure is mounted on the mouth-neck portion of the container, the inner peripheral surface of the outer cylindrical sealing protrusion is in close contact with the outer peripheral surface of the mouth-neck portion, the outer peripheral surface of the inner cylindrical sealing protrusion is in close contact with the inner peripheral surface of the mouth-neck portion, and the annular sealing ridge is in close contact with the top surface of the mouth-neck portion. As a result of this configuration, the container closure of these claims provides hermetic sealing of the container.

As can be seen from the attached translation of the Japanese Patent Publication, that reference states that the sealing means 6 comprises a receiving seat 30 just abutting the top surface of the mouth-neck of the container and a receiving seat 31 just abutting the outer peripheral surface of the mouth-neck of the container. Since the receiving seat 31 just abuts the

outer peripheral surface of the mouth-neck portion of the container, $(D2 - D1) = 0$. This corresponds with comparative example 3 on page 32 of the specification, the results of which are shown in table 6 on page 36 of the specification.

The Office Action contends that an analysis of the Japanese reference without the certified translation shows that the outer sealing protrusion 31 is angled inwardly in Figure 3 when the cap is off the bottle, but that Figure 4 shows the outer sealing protrusion 31 as being vertical when the cap is applied to the bottle. From this, the Office Action contends that the outer sealing protrusion 31 must deflect outwardly when the cap is applied to the bottle, and that therefore the diameter of the outer sealing protrusion must be smaller than the outer diameter of the bottle neck. These contentions are traversed. Figures 3 and 4 of the Japanese reference are of significantly different scales. A better comparison is between Figures 2 and 4 of the Japanese reference. Copies of these figures, having the outer sealing protrusion 6 circled, are attached. From them, it is seen that the outer sealing protrusion 6, 31 remains in substantially the same orientation whether the container closure is on the container or off of the container. Thus, the outer sealing protrusion is not deflected outwardly when the container closure is applied to the container.

In addition, attached is a certified English language translation of column 8, line 45 to column 9, line 5 of the Japanese reference, the only portion of the Japanese patent publication that discusses contact between the outer sealing protrusion or receiving seat 31 and the mouth-neck portion of the container. As can be seen from this translation, the sealing seats 31 just

abuts the outer peripheral surface of the mouth-neck portion of the container. Clearly, in the container closure of the Japanese reference, D2 is substantially equal to D1, and therefore the outer sealing protrusion is not deflected outwardly when the container closure is applied to the container.

It is accordingly submitted that independent claim 1 and its dependent claims 2-19, and independent claim 36 distinguish patentably from the references and are allowable.

Independent claim 20 and its dependent claims 21-27 are directed to a container closure which includes a plurality of ribs formed on the inner surface of a center portion of the top panel wall, within the cylindrical sealing protrusion. The center portion of the top panel wall has a thickness T1 of 0.80 mm to 1.20 mm, and each of the ribs has a thickness T2 of 0.20 mm to 1.00 mm. The total thickness (T1 + T2) of the center portion of the top panel wall and the ribs is 1.20 mm to 1.80 mm. Claims 12-19, which are dependent from claim 1, also include a top panel wall with such ribs. The ribs on the top panel wall avoid potential problems brought about during printing onto the outer surface of the top panel wall, as discussed in the original specification at page 3, line 33 to page 5, line 24 and on pages 12 and 13 of the amendment of February 27, 2003. The May 20, 2003 Office Action contends that it is unclear how the arguments related to such printing are relevant to the subject matter of these claims. Further, the Office Action contends that the top surface of Hidding is shown as being flat and it is unclear why this flat surface cannot receive printing. Hidding's container closure includes ribs, but these ribs are significantly different from the ribs of claims 12-27.

As set forth in the February 27, 2003 Amendment, Hidding is not concerned with the problems of printing on the top surface of the container closure, but is concerned with avoiding a domed shape surface during shrinkage of the molded container cap upon cooling. Hidding's ribs are of a smaller size. Those smaller ribs would likely not prevent the printing problems overcome by Applicants' invention. The larger ribs of claims 12-27 are not obvious in view of Hidding. The Office Action contends that providing ribs of different dimensions would be a matter of routine to a person skilled in the art. However, the fact that Hidding is concerned with avoiding a dome shape on the top surface is relevant since that problem can be solved by the smaller dimension ribs of Hidding. In contrast, the problems associated with printing on the top surface of the container closure would not be overcome by Hidding's ribs, but would be avoided by the ribs of the claimed dimension. Note that Dutt, United States Patent No. 4,560,077, proposes ribs having a height of up to 0.60 inches to prevent doming. Hidding and Dutt are concerned with doming, a problem substantially the opposite of that overcome by Applicants' container closure as set forth in claims 12-27. It is accordingly urged that claims 12-19 are allowable for this further reason, as well as those set forth above with respect to the Japanese Patent Publication No. 10/35699, and that claims 20-27 distinguish patentably over Hidding.

wrong
0.6 in
1.524mm


Minor amendments have been made to the claims to assure the clarity of the dimensions set forth in the claims. With respect to the amendments to the specification in the February 27, 2003 Amendment, in view of the extent of those amendments, a substitute specification was presented, together with a

marked copy of the original specification. The undersigned attorney affirms that that substitute specification included no new matter.

In view of the above amendments and remarks, it is respectfully urged that all of the grounds for objection and rejection have been overcome, that the claims are allowable, and that the application is in condition for allowance. Such action would be appreciated.

To the extent necessary, Applicants petition for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (Case No. 358.39731X00) and please credit any excess fees to such deposit account.

Respectfully submitted,


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JND/kmh

Attachments

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Kano, et al.
Serial No.: 09/804,267
Filed: March 13, 2001
For: Synthetic Resin Container Closure
Group: 3727
Examiner: Newhouse, Nathan Jeffrey

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I certify as follows:

I am conversant in the Japanese and English languages. Attached is a true and correct English language translation of column 11, lines 16 to 23 from Japanese Patent No. 10-35699. This is the only portion of that patent that discusses contact between receiving seat 31 and the mouth-neck portion of the container.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Executed on February 7, 2003

Signed: _____

Print Name Eiju Shirosawa

English Translation
of Japanese Patent Publication 10-35699

- column 11, lines 16 to 23 -

In Fig. 3, a lasting sealing means 6 is formed at the outer side of the inner ring 5 on the top panel wall 2. This sealing means 6 comprises a receiving seat 30 just abutting on the top surface of the mouth-neck, a receiving seat 31 just abutting on the outer peripheral surface of the mouth-neck and at least one sealing protrusion 34. There are grooves 32 and 33 between the seat 30 and the sealing protrusion 34 and between the seat 31 and the sealing protrusion 34, respectively. The sealing protrusion 34 slightly protrudes from the surface of the mouth-neck on which the seats 30 and 31 abut.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE


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I certify as follows:

I am conversant in the Japanese and English languages. Attached is a true and correct English language translation of column 8, line 45 to column 9, line 5 from Japanese Patent No. 10-35699. This is the only portion of that patent that discusses contact between receiving seat 31 and the mouth-neck portion of the container.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Executed on September 8, 2003

Signed: 

Print Name Eiju SHIROSAWA

English Translation
of Japanese Patent Publication 10-35699

- column 8, line 45 to column 9, line 5 -

In the preferred cap of this invention, at the outside of the inner ring on the top panel wall, there are provided receiving seats just abutting the top surface and outer peripheral surface of the mouth-neck portion of the container and a sealing protrusion. There are grooves between the seats and the sealing protrusion, and the sealing protrusion protrudes slightly from the surface of the seats. In the final stage of cap mounting operation, the sealing protrusion engages with the corner of the mouth-neck portion, and the protrusion is pressed. The grooves at the both side of the protrusion allow the deformation of the protrusion, and the portion of the protrusion protruding from the surface of the seats deforms into the grooves (at this stage, the seats just abutting on the top surface and outer peripheral surface of the mouth-neck portion), thus the mouth-neck portion is sealed.